



# TLEF Project – Final Report

Report Completion Date: 2021/04/30

## 1. PROJECT OVERVIEW

### 1.1. General Information

<b>Project Title:</b>	Enhancing PSYC 217 Research Methods for Psychology Majors		
<b>Principal Investigator:</b>	Catherine Rawn		
<b>Report Submitted By:</b>	Catherine Rawn		
<b>Project Initiation Date:</b>	March 2019	<b>Project Completion Date:</b>	April 2021
<b>Project Type:</b>	<input type="checkbox"/> Large Transformation <input checked="" type="checkbox"/> Small Innovation <input type="checkbox"/> Flexible Learning <input type="checkbox"/> Other: [please specify]		

### 1.2. Project Focus Areas – Please select all the areas that describe your project.

- Resource development (e.g. learning materials, media)
- Infrastructure development (e.g. management tools, repositories, learning spaces)
- Pedagogies for student learning and/or engagement (e.g. active learning)
- Innovative assessments (e.g. two-stage exams, student peer-assessment)
- Teaching roles and training (e.g. teaching practice development, TA roles)
- Curriculum (e.g. program development/implementation, learning communities)
- Student experience outside the classroom (e.g. wellbeing, social inclusion)
- Experiential and work-integrated learning (e.g. co-op, community service learning)
- Indigenous-focused curricula and ways of knowing
- Diversity and inclusion in teaching and learning contexts
- Open educational resources
- Other: [please specify]



**1.3. Final Project Summary**

Over two years, we completed the first-ever systematic enhancement of the student research experience in PSYC 217, Research Methods, which is a required course offered to 700-900 students annually (~9 sections). We had three priorities: 1) create consistent learning objectives; 2) create a TA rubric training module; and 3) create a customized lab guide (using Canvas modules) to scaffold student experience throughout the group project, including support for group dynamics.

- 1) We partnered with course instructors to develop a consistent lab syllabus, including learning objectives that aligned with course content and assessments.
- 2) We adapted the Peer Assessment Training Tool (Large TLEF from 2015/16, PI Peter Graf, Co-Applicant Catherine Rawn) to train TAs to use the rubric to grade student projects more consistently. Analyses of TA’s grades demonstrate that the training module had an impact on reducing skew from 2018 (before the training module was implemented) to 2019 (after the training module was implemented). We elicited feedback on the training module from TAs, and are using this data to further strengthen the training module.
- 3) In W19, we implemented surveys and focus groups to gain insight into what undergraduate students in the course appreciated, wanted to see changed, and wanted to see more of. We used this information to inform the creation of extensive online lab modules that were able to support the largest-ever single term cohort (almost 800 students) in a fully asynchronous online course in W2020. We received positive feedback overall from students, and are using student feedback and instructor feedback from W2020 to further update the online modules.

**1.4. Team Members** – Please fill in the following table and include students, undergraduate and/or graduate, who participated in your project.

Name	Title/Affiliation	Responsibilities/Roles
Catherine Rawn	Professor of Teaching, Psychology	<ol style="list-style-type: none"> <li>1) Evaluated and updated existing grading rubric</li> <li>2) Co-created common lab learning objectives (collaboration with other course instructors)</li> <li>3) Co-created lab syllabus (collaboration with other course instructors, especially Course Coordinator Mark Lam)</li> <li>4) Collected permission from former students to use papers to train TAs</li> <li>5) Collected, synthesized, and analyzed final paper rubric grades for all three years</li> <li>6) Collected, synthesized, and analyzed impact of TA training modules</li> <li>7) Oversaw analysis of student data and steered development of lab modules</li> </ol>
Kyle Gooderham	PhD Student, Psychology	<ol style="list-style-type: none"> <li>1) Evaluated and updated existing grading rubric</li> <li>2) Co-created lab syllabus (collaboration with other course instructors, especially Course Coordinator Mark Lam)</li> <li>3) Adapted Peer Assessment Training Tool to create TA training modules</li> <li>4) Co-created online research lab guide modules</li> </ol>



		<ol style="list-style-type: none"> <li>5) Developed, implemented and analyzed surveys of Teaching Fellows and students Fall 2019/2020</li> <li>6) Consulted with course instructors for Fall 2020 to receive feedback and revise lab guide modules</li> <li>7) Co-wrote 2019/2020 and 2020/21 departmental reports to disseminate findings of student feedback on efficacy of modules</li> </ol>
Natasha Pestonji	PhD Candidate, Psychology	<ol style="list-style-type: none"> <li>1) Evaluated and updated existing grading rubric</li> <li>2) Co-created lab syllabus (collaboration with other course instructors, especially Course Coordinator Mark Lam)</li> <li>3) Adapted Peer Assessment Training Tool to create TA training modules</li> <li>4) Co-created online research lab guide modules</li> <li>5) Developed, implemented and analyzed surveys of Teaching Fellows and students Fall 2019/2020</li> <li>6) Consulted with course instructors for Fall 2020 to receive feedback and revise lab guide modules</li> <li>7) Co-wrote 2019/2020 and 2020/021 departmental reports to disseminate findings of student feedback on efficacy of modules</li> <li>8) Submitted findings for presentation at the Association for Psychological Science Annual Meeting and TLEF showcase</li> </ol>
Aanandi Sidharth	Undergraduate Student, Psychology	<ol style="list-style-type: none"> <li>1) Co-created online research lab guide modules</li> <li>2) Provided instructional and technical support for first launch of online lab guide modules</li> <li>3) Developed, implemented and analyzed survey of Teaching Fellows and students Fall 2020</li> </ol>

**1.5. Courses Reached** – Please fill in the following table with ***past***, ***current***, and ***future*** courses and sections (e.g. HIST 101, 002, 2017/2018, Sep) that have been/will be reached by your project, including courses not included in your original proposal (you may adapt this section to the context of your project as necessary).

Course	Section	Academic Year	Term (Summer/Fall/Winter)
PSYC 217 Research Methods	001, 002, 003, 004, 005, 006, 007, 901, 921	2019/20, 2020/21, and all future sections	Sep/May



**2. OUTPUTS AND/OR PRODUCTS**

**2.1.** Please **list** project outputs and/or products (e.g. resources, infrastructure, new courses/programs). Indicate the current location of such products and provide a URL if applicable.

Product(s)/Achievement(s):	Location:
Common Course-level Learning Objectives:  To reflect the research assignment and alignment with Program Level Outcomes.	Within the shared Canvas course for the instructional team (WS.PSYC217.COORDINATION&RESOURCES) and PSYC 217 Course Lab syllabus
Research Paper Grading Training Module for Teaching Assistants	Within the shared Canvas course for the instructional team (Canvas course WS.PSYC217.COORDINATION&RESOURCES) Implemented so TAs have “Student status” to complete the training (Canvas course WS PSYC 217 TF TRAINING)
Research Lab Guide:  Free, adaptable, and better addresses the needs of students as they work through the group research project.	Originals housed in the shared Canvas course for the instructional team (WS.PSYC217.COORDINATION&RESOURCES) Additionally, we have openly shared all modules in Canvas Commons for use elsewhere: Part 1: <a href="https://lor.instructure.com/resources/e30667c35b944053ababf437999d3792?shared">https://lor.instructure.com/resources/e30667c35b944053ababf437999d3792?shared</a> Part 2: <a href="https://lor.instructure.com/resources/555bd6ccbf19440bba84f50c36806257?shared">https://lor.instructure.com/resources/555bd6ccbf19440bba84f50c36806257?shared</a> Part 3: <a href="https://lor.instructure.com/resources/7a55a9d37ddc49aa94b2039072eb5501?shared">https://lor.instructure.com/resources/7a55a9d37ddc49aa94b2039072eb5501?shared</a> Part 4: <a href="https://lor.instructure.com/resources/92cd830f54b041799843b944970c9b10?shared">https://lor.instructure.com/resources/92cd830f54b041799843b944970c9b10?shared</a> Part 5: <a href="https://lor.instructure.com/resources/18d4a3033d934e46baef9b0b14f74349?shared">https://lor.instructure.com/resources/18d4a3033d934e46baef9b0b14f74349?shared</a> Part 6: <a href="https://lor.instructure.com/resources/59a5643767244a37a89c33dcf57eb3ae?shared">https://lor.instructure.com/resources/59a5643767244a37a89c33dcf57eb3ae?shared</a> Part 7: <a href="https://lor.instructure.com/resources/fd3e1530b0b344a9bedab879cd3a353d?shared">https://lor.instructure.com/resources/fd3e1530b0b344a9bedab879cd3a353d?shared</a> Part 8: <a href="https://lor.instructure.com/resources/586a4b99a9c846c0bc07dc781b04f4bd?shared">https://lor.instructure.com/resources/586a4b99a9c846c0bc07dc781b04f4bd?shared</a>

**2.2. Item(s) Not Met** – Please list intended project outputs and/or products that were not attained and the reason(s) for this.

Item(s) Not Met:	Reason:
N/A	

**3. PROJECT IMPACT**

**3.1. Project Impact Areas** – Please select all the areas where your project made an impact.

- Student learning and knowledge
- Student engagement and attitudes
- Instructional team-teaching practice and satisfaction
- Student wellbeing, social inclusion
- Awareness and capacity around strategic areas (indigenous, equity and diversity)



- Unit operations and processes
- Other: [please specify]

**3.2. What were you hoping to change or where were you hoping to see an impact with this project? – Please describe the intended benefits of the project for students, TAs, instructors and/or community members.**

The proposed project sought to enhance/develop: 1) consistent lab learning objectives; 2) a TA rubric training module for grading lab papers; and 3) a customized online lab guide.

1) Learning Objectives

The goal of the learning objectives was to develop one consistent lab guide to be used across sections. The intended benefit was to ensure consistency across instructors, which provides a more equitable experience for students and TAs across sections of the course.

2) TA Rubric Training Module

The goal was to adapt the Peer Assessment Training Tool to train TAs in the course on how to use the paper grading rubric for students' final project papers (each TA marks at least 25 papers, and typically 40-50 papers). The intended benefit was to improve the consistency of grading across TAs, and to provide consistent support for new TAs.

3) Customized Online Lab Guide

The goal was to create a series of lab modules to replace an outdated and expensive paper lab guide. The intended benefits were to: 1) remove the financial barrier of the paper lab guide, and 2) address numerous concerns voiced by students anecdotally (which were confirmed by student comments in the W2019 student survey).

**3.3. Were these changes/impacts achieved? How do you know they occurred? – How did you measure changes/impacts? (e.g. collected survey data, conducted focus groups/interviews, learning analytics, etc.) Describe what was learned from this process. You are encouraged to include copies of data collection tools (e.g. surveys and interview protocols) as well as graphical representations of data and/or scenarios or quotes to represent and illustrate key themes.**

1) Learning Objectives

All sections of the course now have a consistent lab guide with the same learning objectives. These learning objectives provide consistency and equity across sections, and were thoughtfully designed to ensure alignment between objectives, assessments, and course content.

2) TA Rubric Training Module

The new TA rubric training module provides support for new TAs, and orients TAs to the bigger picture of the course from the start. We used two metrics to measure success of the module:

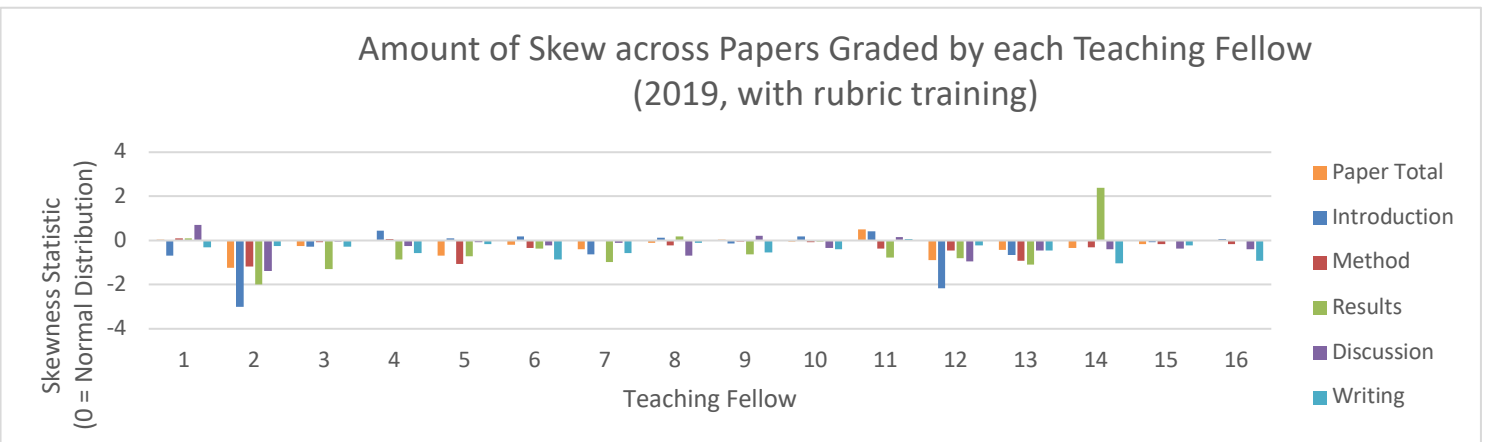
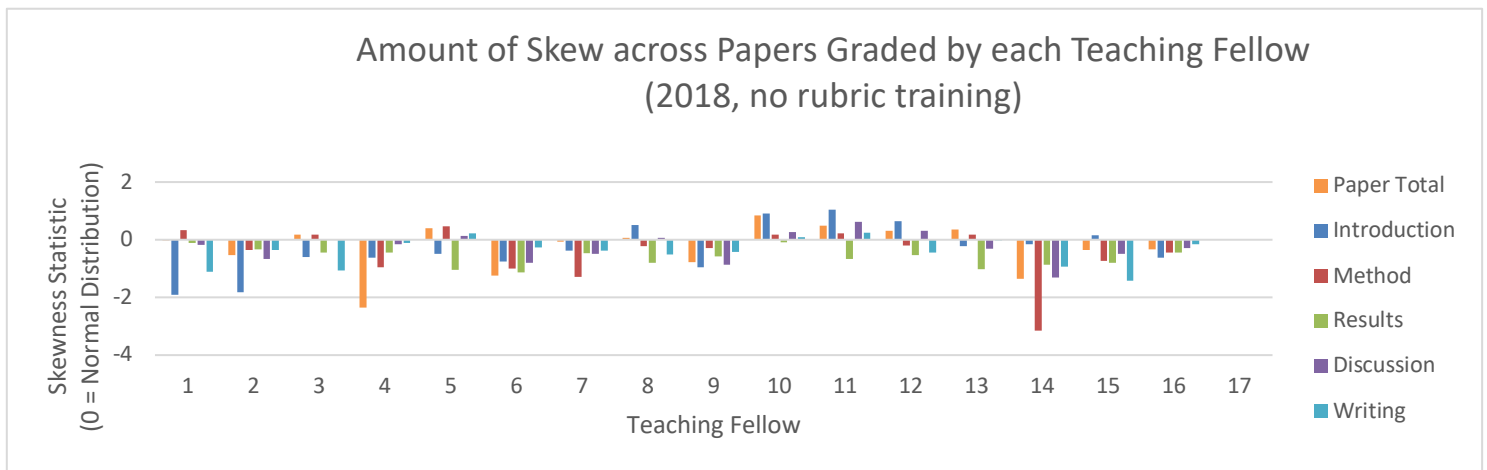
- 1) **TA grading skew.** The training module had an impact in reducing skew across TA grading between 2018 (no training module) and 2019 (all TAs trained with training module). We did not see this improvement



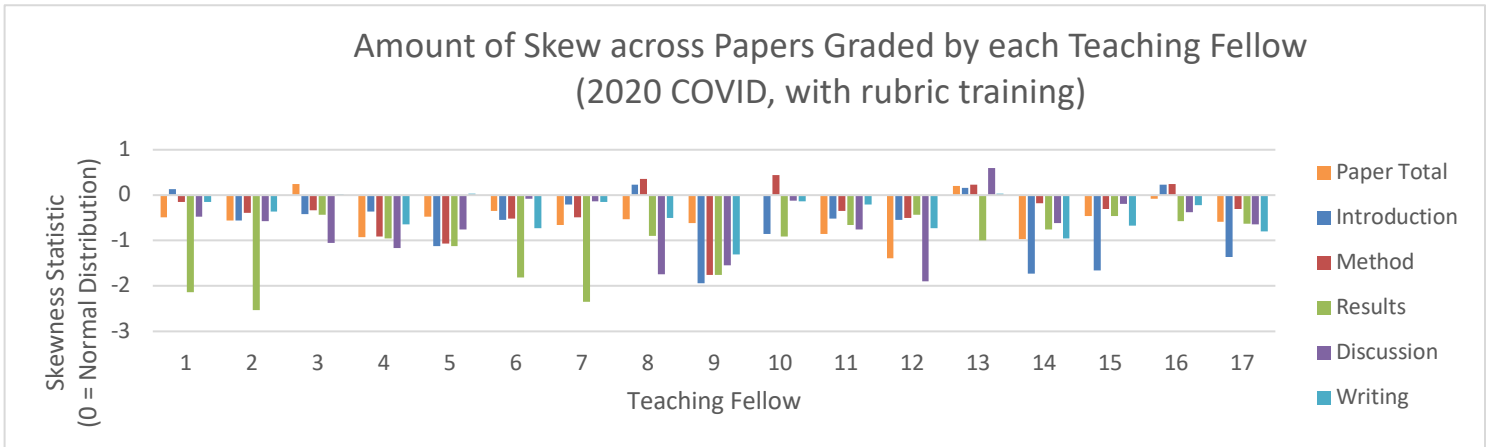
in 2020, which may be attributed to a number of factors due to an unusual year of teaching. We chose skew as it provides a measure of variability from the normal distribution expected for grading papers.

The amount of skew decreased overall from 2018 to 2019, as displayed in the two graphs below. Each cluster of bars represents one TA; each colour represents the average grade that TA provided for each component of the paper. Zero skew indicates that the TA distinguished among papers on a normal distribution (which is what we seek, especially for Introduction and Discussion sections). Negative skew means the TA tended to give high marks for that component across most of the papers they graded; positive skew means the TA tended to give low marks for that component across most of the papers they graded. Note that we are less concerned about skew on certain components of the paper (i.e., Methods and Results sections, depicted in red and light green, respectively), as these are not expected to be normally distributed.

From the 2018 to 2019 data, we see clear evidence that the training module is improving the consistency in grading across TAs, as well as improving their use of the grading rubric to differentiate quality of student work.



We also examined results in 2020, hoping to replicate the effect seen in 2019. Unfortunately, there is pronounced skew in the 2020 cohort, as displayed in the graph below. This may be a result of various factors, such as the impact of COVID19 on the TAs, the first fully online PSYC 217 cohort, and others. We hope and expect that as we return to a more in-person experience next year, the distributions will return to levels seen in 2019.



- 2) **TA Feedback.** We asked TAs to complete a feedback survey at the end of the training module. This survey offered corroborating evidence that TAs found the training module to be helpful. Of the 9 TAs who completed the training in 2019, 8 indicated that they “Agree” or “Strongly Agree” that *“Because of the workshop, I have a better sense of how to evaluate my students’ written work in this course”* and 7 indicated that they “Agree” or “Strongly Agree” that *“This workshop will help me succeed in my role as a TF in this course”* (the other 2 TAs responded neutrally). The results of the feedback survey also demonstrated that the workshop could be improved by providing a few more sample papers, with 7 out of 9 respondents stating that they “Agree” or “Strongly Agree” that *“I would have liked more opportunities for comparing my grading [with the grades assigned by peers] and [with the instructor’s grading].”* We plan to add additional grading practice to further strengthen the training module for future terms.
  
- 3) **Customized Online Lab Guide.** At the start of the project, the goal was to create a series of lab modules to replace an outdated and expensive paper lab guide. Due to the impact of COVID-19 on in-person instruction, the online lab modules were developed more extensively than the original plan. Not only did the lab modules created replace the lab guide, they were able to support the highest enrollment semester of (almost 800) students through the complete lab component, including a commitment to offering a fully asynchronous option for those in need. The lab modules now include everything student groups need to complete their research projects, as well as instructor and TA guides, and are easy to adapt and update year-to-year and across different sections or even different institutions. These modules directly benefit students by removing the financial barrier of the paper lab guide (approximately \$40 per student), providing a large collective savings of a recommended resource. The lab modules were built to address numerous concerns voiced by students in the first iteration of our student survey, and were positively received by the students. We offer some of that evidence below.

### **Student Feedback from W2019, used to shape priorities in online module development summer 2020**

We invited all 803 students enrolled in PSYC 217 in Fall 2019 to participate in a series of surveys: 5 Post-Lab surveys immediately following each lab session, and an End-of-Term survey (please find a copy of these surveys in Appendix B). We performed descriptive statistics and thematic qualitative analysis on survey responses to identify what is working well, what students need, and what they suggest. We identified four primary areas to help us build effective Canvas Modules to support students: 1) Lab guide essentials, 2) Groupwork dynamics/support, 3) Data analysis/Excel support, and 4) Writing/APA style support.

#### **1) Lab guide essentials**

Qualitative analysis of both Post-Lab and End-of-Term surveys revealed that the high cost of the lab guide was a prevalent theme (*“I think an affordable alternative option would be beneficial to all students in this class”*). We suspect the high cost and low reported usage rates were connected to another common theme: many students responded that the lab guide was unnecessary/unused or that other resources (e.g. instructor/TF, text) were sufficient. Yet quantitative analyses suggested that students who used it rated it as a fairly useful resource to support each individual lab session ( $M = 5.26-5.58$  on a 7-point scale where 7 = strongly agree).

We asked students to identify features and resources that are essential or desirable for a lab guide. The three most common themes for requested resources were: 1) Detailed guides to writing an APA style paper (*“Essential to include tips on how to properly write an APA style paper [each section with key points to cover]”*); 2) More examples and templates (*“...Give examples of what other students have done in the past so we can see what breadth of study we should be aiming for”*); and 3) More checklists/worksheets to structure lab prep and division of work (*“A checklist of what is needed to complete each lab. A good example was the checklist for preparing our PowerPoint slides”*).

We directly applied this feedback to the creation of the lab guide modules: 1) we adapted a stand-alone APA style module for additional reference; 2) we included examples of each formative or summative assessment in the lab component of the course; and 3) we included formative assessments and checkpoints during each lab to ensure equal contributions across group members, as well as pre- and post-lab interactive checklists for students to ensure they completed each component of the lab.

#### **2) Groupwork dynamics/support**

On average, students in 2019 indicated that they felt prepared to work with their group ( $M = 5.86$  on a 7-point scale), were able to resolve groupwork challenges that arose ( $M = 5.80$ ) and felt quite comfortable asking for group dynamics support from their instructor/TF ( $M = 5.71$ ).

On the final “Anything else we should know” question of the End-of-Term survey, a small number of students spontaneously indicated some issues with uneven workload, difficulty of meeting outside class time, and group sizes (*“6 people are too much for one group. Only half of them do all the work. 3~4 people for a group would be the best”*). However, most students overall appreciated the opportunity to learn from their peers and receive peer feedback (*“The question period where our peers and the TF asked us questions really helped us identify any limitations or potential confounding variables...”; “...thinking critically about other student's projects, seeing what they've done and what they can improve on, thereby helping us see what we need to work on.”*).

We directly incorporated this feedback into our modules by weaving in groupwork tips and strategies, as well as some accountability mechanisms (e.g., individual Lab summaries) so that instructors and TAs can see when a group member is not engaging with the work (helps with outreach).





### 3) Data analysis/Excel support

As reported in 2019, PSYC 217 was the first time using Excel for 38% of students. Those who had previous experience with excel felt quite a bit more prepared to use it ( $M = 5.39$  compared to  $M = 4.23$  on a 7-point scale). As a result, some students felt the resources and support provided were sufficient (*"I found this lab to be the most helpful so far. I was at a loss at how I was going to organize all of my data, and I had no idea how to work excel. After just this 90 minute lab I feel fairly confident in the way I have done my calculations and graphing"*) whereas others would have appreciated more support (*"I wish we could have received more assistance with the graphing of the data. I had to ask a friend from a different school to help me with the Excel component as I didn't understand it, nor did my group members"*). Across Post-Lab and End-of-Term surveys, qualitative analyses indicated that students would appreciate more data analysis support overall, in the form of more detailed checklists/flowcharts, online resources to refer to, and in-person support while working on their own data, not simply sample data (as is often used for demonstrations in the current labs).

We directly incorporated this feedback into our module for Lab 4 (Data analysis), including external resources and guidance on using Excel for beginners, and an extensive list of data analysis resources (partially sourced from student suggestions from the W2019 survey).

### 4) Resources for writing/APA style

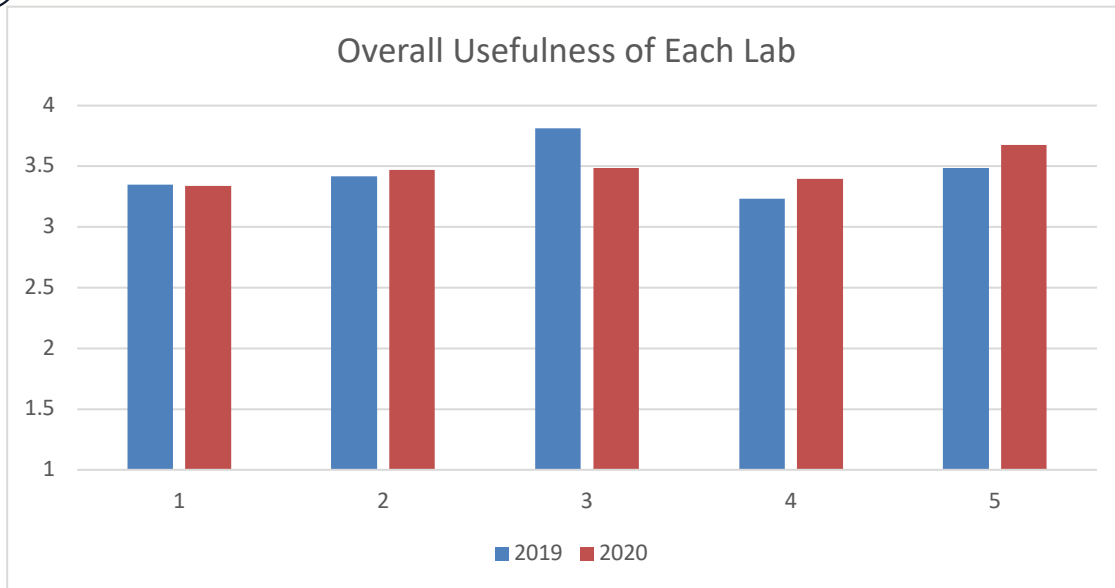
On average in 2019, students indicated that they felt prepared to write an APA style paper ( $M = 5.48$  on a 7-point scale), and that they learned something about the research process from doing so ( $M = 5.86$ ). The Post-Lab surveys indicated that while students found the APA style/writing lab helpful (*"I was really scared about writing the research paper but after this session I was more at ease because my TA explained the process simply and in a straightforward manner"*), many indicated that they would have appreciated more take-home/online resources for ongoing reference (*"Instead of changing to improve the lab, I think continuing to provide supporting resources...will definitely help students to learn about the structure of the paper"*).

We directly incorporated this feedback into our module for Lab 5, including numerous online resources on how to write as well as on APA style. We adapted an APA style Canvas module to create an additional reference module on how to write an APA style paper.

Beyond these four primary areas of feedback, no other common themes emerged from student comments. Overall, there was good evidence that all of our existing lab sessions and the overall project were viewed to be helpful to students. Thus, our work developing a lab guide in the form of Canvas modules addressed each of these four primary areas, while supporting the existing structure.

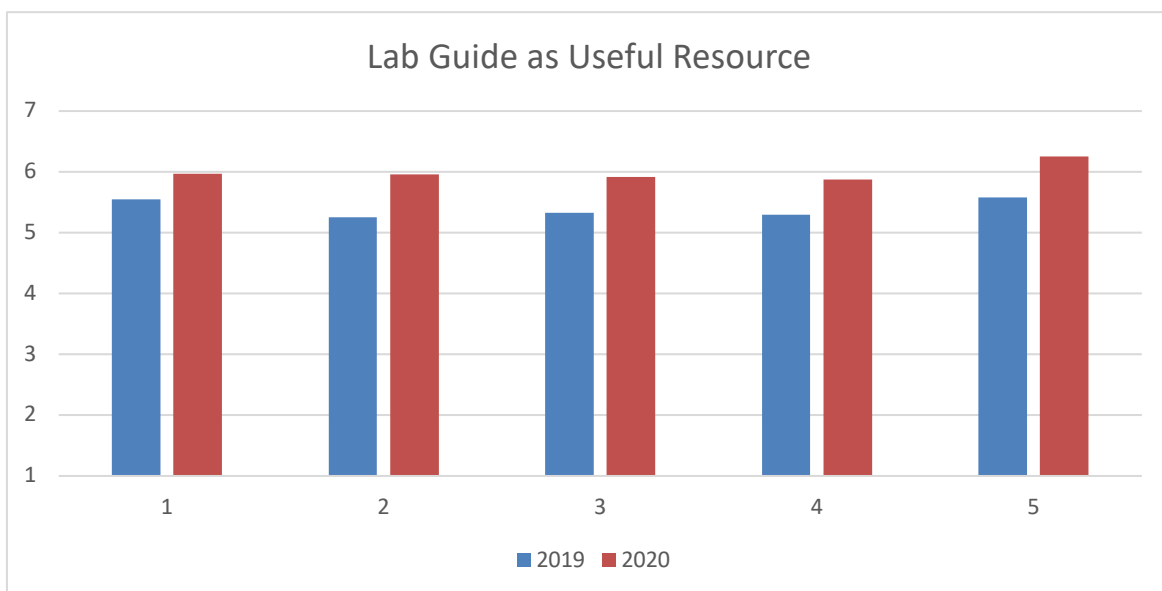
### Comparing Student Feedback from 2019 to 2020

Following each of the five lab sessions, students in W2019 (prior to online lab modules; in person lab sessions only, with an underused "recommended" paper lab guide) and W2020 (with online lab modules) were asked about how useful they found each lab, on a 4-point scale (ranging from 1: *not useful at all* to 4: *very useful*). Results demonstrated that: 1) Labs 1 and 2 were rated similarly across the two years; 2) Lab 3 was rated slightly lower in W2020 compared to W2019; and 3) Labs 4 and 5 were rated slightly higher in W2020 compared to W2019. In W2019, we received an average of 466 responses (range: 387-574 responses) on each lab survey; in W2020, we received an average of 420 responses (range: 337-511 responses) on each lab survey.



These findings are positive: 1) The findings for Lab 1 and 2 demonstrate that even offered online, these two labs are serving students well. 2) The findings for Lab 3 provide a helpful validation – Lab 3 is a data collection lab, during which students perform their experiments on their peers. It is unsurprising that this lab is best done in-person rather than online. 3) Labs 4 and 5 were often the labs that students provided anecdotal negative feedback about, and relate back to themes 3 and 4 above (data analysis support and APA style support). These findings confirm that the changes we made to the online lab guide are proving more useful to the students than what was offered to them before.

The post-lab surveys also asked students specifically about the lab guide/online modules, asking students to indicate their agreement with the following statement: “The lab guide/online module was a useful resource for preparing for this lab and/or working on the group project during lab time” on a 7-point scale (ranging from 1: *strongly disagree* to 7: *strongly agree*). Results demonstrated that students rated the online lab modules as a more useful resource across all five labs. This provides compelling evidence that the online modules we created are an improvement to the existing paper lab guide.





**3.4. Dissemination** – Please provide a list of **past** and **upcoming** scholarly activities (e.g. publications, presentations, invited talks, etc.) in which you or anyone from your team have shared information regarding this project. Be sure to include author names, presentation title, date, and presentation forum (e.g., journal, conference name, event).

**Rawn, C., Pestonji, N., & Gooderham, G.K. (2020, April).** Departmental Report.

**Rawn, C., Pestonji, N., Gooderham, G.K., & Sidharth, A. (2021, May).** Departmental Report.

**Pestonji, N., Gooderham, G.K., Sidharth, A., & Rawn, C. (2021, May).** Enhancing Undergraduate Research Methods Lab Experience. E-Poster to be presented at the online *Teaching and Learning Enhancement Fund Showcase* at the University of British Columbia.

**Pestonji, N., Gooderham, G.K., Sidharth, A., & Rawn, C. (2021, May).** Enhancing Undergraduate Research Methods Lab Experience. E-Poster to be presented at the online Annual Meeting of the *Association of Psychological Science, Teaching Institute*.

**4. TEACHING PRACTICES** – Please indicate if **your** teaching practices or those of **others** have changed as a result of your project. If so, in what ways. Do you see these changes as sustainable over time? Why or why not?

Teaching practices for all instructors of PSYC 217 have changed in three primary ways: 1) They follow a common syllabus for the lab component, including LOs; 2) the paper lab guide has been replaced with the online lab modules; and 3) All TAs for the course are provided with training on grading papers.

These resources provide the instructional team with flexibility in offering the course online or in-person in future years, and are (relatively) easily updated as needed because as they are modules within Canvas. The lab guide modules in particular provide an additional opportunity for instructors/TAs to consistently check in on students and hold each group member accountable for their contributions to the group project, as there are formative quizzes and checks throughout the term.

**5. PROJECT SUSTAINMENT** – Please describe the sustainment strategy for the project components. How will this be sustained and potentially expanded (e.g. over the next five years). What challenges do you foresee for achieving the expected long-term impacts listed above?

We foresee minimal challenges to sustaining, updating, and sharing these resources. As both primary resources are designed within Canvas modules, it is easy to update the content year-to-year, to add additional modules, or to address student/instructor feedback (this is already underway based on minor feedback from W2020). PSYC 217 is taught by a consistent group of faculty members who check in regularly with each other, under the leadership of a Course Coordinator. These resources will continue to exist in the shared common course shell, where they can be updated and exported into each individual course.

The lab modules have also been made available in the Canvas Commons for use by instructors at other institutions. Dr. Rawn's involvement in various committees as well as upcoming conference presentations of this project provide additional opportunities to share these resources with others.



### Appendix – Student Surveys

#### Post-Lab Survey

1. Overall, how useful did you find Lab 1?

- 4 = Very useful
- 3 = Moderately useful
- 2 = Slightly useful
- 1 = Not useful at all

2. Please indicate your agreement with the following statements.

	Strongly disagree (1)	Disagree (2)	Slightly disagree (3)	Neither agree nor disagree (4)	Slightly agree (5)	Agree (6)	Strongly Agree (7)
This lab helped me learn about the research process.							
This lab helped me make progress on my group's research project and/or my individual lab report.							
The lab guide/online was a useful resource for preparing for this lab and/or working on the group project.							

3. Think about the progress you're making toward your major project. What aspect(s) of this Lab were most helpful for you for making progress? You might consider the structure of this Lab, guiding questions or feedback you were given, or supporting resources. It would be most helpful for us to know why you found this aspect helpful.

4. If you were to make one change to improve this Lab for next year's students, what would you change? For example, you might consider additions/changes/deletions to the way this Lab is structured, or what supporting resources are available. It would be most helpful for us to know why you recommend this change.

5. Is there anything else you would like us to know with respect to this Lab?



### End-of-Term Survey

1. Recall the lab guide, a book written by Cuttler and published by KendallHunt. In what way(s) did you access the lab guide, if at all? Check all that apply.

- purchased a NEW lab guide
- purchased a USED lab guide
- BORROWED a lab guide from a previous student
- SHARED a lab guide with a current student
- I did not use a lab guide at all
- Other: (Text Entry)

2. Each chapter in the lab guide included up to six sections. Which of the following sections of the lab guide did you use to help you complete the project and/or your final paper? Check all that apply:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	I don't remember	N/A
Advanced Preparation: Checklists + tips for how to prepare for that lab							
Worksheet with questions of achievement milestones, sometimes handed in (Labs 1-4)							
Question Prompts: Short answer questions to help complete that part of the project							
Relevant Material Recaps: Summaries of course content relevant to that lab							
Division of Duties: To help assign roles to each group member (Labs 1-4)							
Other							

3. Think about what you wanted out of a lab guide, in order to complete this project successfully. What element, feature, and/or resource do you think is \*essential\* to include?

4. What element, feature, and/or resource do you think would be nice to include in a lab guide, but is not necessarily essential?

5. What (if any) materials did you use to support you in this group research project (whether or not they were provided/recommended by your teaching team)? Please include a link to the materials if they are available online:

6. Was PSYC 217 your first time using Microsoft Excel?

- Yes
- No



7. What (if any) materials did you use that were not provided/recommended by your teaching team? Please include a link to the materials if they are online:

8. Did your Teaching Fellow post slides or make them available to you?

- Yes
- No

9. To what extent did you use the slides?

- 5 = Always
- 4 = Most of the time
- 3 = About half the time
- 2 = Sometimes
- 1 = Never

10. Which resources did you refer to for assistance with APA style and formatting (check all that apply)?

- Teaching Fellow/Instructor
- Lab Guide
- Cozby & Rawn Textbook
- Purdue Online Writing Lab (OWL)
- APA's Style Guide
- Other (Text Entry)

11. To what extent did you feel presentation skills were emphasized enough in class?

- 5 = Extremely well
- 4 = Very well
- 3 = Moderately well
- 2 = Slightly well
- 1 = Not well at all

12. To what extent did your group plan the spoken presentation and ensure each member was consistent?

- 5 = A great deal
- 4 = A lot
- 3 = A moderate amount
- 2 = A little
- 1 = None at all

13. Please indicate your agreement with the following statements.

Strongly agree (1)	Agree (2)	Slightly agree (3)	Neither agree nor disagree (4)	Slightly disagree (5)	Disagree (6)	Strongly disagree (7)	I don't remember (N/A)
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I felt prepared to present my project during Lab 2.
I learned something about the research process from presenting my research project during Lab 2.
I felt prepared to use Microsoft Excel to complete data analysis and create appropriate graphs after Lab 4 (data analysis).
I felt prepared to present my project during the poster session.
I learned something about the research process from the poster session.
I felt prepared to write an APA style paper.
I learned something about the research process from writing an APA style paper.

14. Please indicate your agreement with the following statements.

Strongly agree (1)	Agree (2)	Slightly agree (3)	Neither agree nor disagree (4)	Slightly disagree (5)	Disagree (6)	Strongly disagree (7)	I don't remember (N/A)
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I felt prepared to work with my group.
I learned something about the research process from working in a group.
My group was able to resolve the groupwork challenges that arose in our group.
My group sought out instructor/ TF input/ intervention to help with groupwork challenges.
My group would have benefitted from instructor/ TF input/ intervention to help with groupwork challenges.
I felt comfortable talking with my TF or instructor about groupwork challenges.

15. What is one piece of advice you would give next year's PSYC 217 students regarding any aspect of their research project?

16. Anything else we should know?